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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,771	09/19/2001	Gary L. Cole	END920010028	9827

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EXAMINER	
HOANG, PHUONG N	
ART UNIT	**PAPER NUMBER**
2194	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/955,771	COLE ET AL.	
	Examiner	Art Unit	
	Phuong N. Hoang	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 - 30 are pending for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 - 3, 5 – 9, 11 – 13, 15 – 19, 21 – 23, and 25 – 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton "Using non-Java code" pages 1 – 29 in view of Chan, US patent no. 6,769,123.

4. Thornton reference was cited in the last office action.

5. **As to claim 1,** Thornton teaches a method of facilitating calls to objects, the method comprising the steps of:

determining an identifier of a method to be invoked on an object, the determining using at least a portion of a method signature (identifying signatures in the type library,

page 18 on section Type Libraries) corresponding to the method and generated from a typelib associated with the object.

Thornton does not explicitly teach the step of employing a dynamic proxy object wherein the dynamic proxy object implements an interface at runtime, the interface corresponding to the method identified by the identifier.

Chan teaches employing a dynamic proxy object, (proxy object invoked at runtime, col. 3 lines 5 – 32 and col. 5 lines 5 – 10) to facilitate a call to the object, wherein the dynamic proxy object implements an interface at runtime (proxy object implement an interface that is neutral with respect to client-server mode and the standalone mode), the interface corresponding to the method identified by the identifier.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Thornton and Chan's system because Chan's dynamic proxy object is well known for being invoked at runtime and implementing the interface to call an object between interoperable object models.

6. **As to claim 2**, Thornton teaches the step of wherein the object is of an object model different from an object model of the method signature (COM and Java objects, page 19).

7. **As to claim 3**, Thornton teaches the step of wherein the object is a COM object and the method signature is written in Java (Java method signature, page 22 on paragraph 3).

8. **As to claim 5**, Thornton teaches the step of wherein the determining comprises using the method signature to look-up the identifier in a data structure, the data structure being separate from the method (uses the information in the type library, page 18 on section type libraries).

9. **As to claim 6**, Thornton teaches the step of wherein the employing comprises using the identifier and one or more arguments of the method signature in a call to a native method of the object (page 5 on section Accessing JNI and page 7 paragraph 3), the native method performing the call to the object (native method, page 2 on sections JNI and Calling a native method).

10. **As to claim 7,** this is the method claim of claims 1 and 6. See the rejection for claims 1 and 6 above.

11. **As to claim 8**, Thornton teaches the step of wherein the identifier is separate from the method signature and the method (one of ordinary skill in the art can recognize that the identifier is the id of the method not the method itself).

12. **As to claim 9,** see rejection for claim 5 above.

13. **As to claim 11,** this is the method claim of claim 1. See the rejection for claim 1 above.

14. **As to claims 12 - 13,** see rejection for claims 2 - 3 above respectively.

15. **As to claims 15 - 16,** see rejection for claims 5 - 6 above respectively.

16. **As to claim 17,** this is the system claim of claim 7. See the rejection for claim 7 above.

17. **As to claims 18 - 19,** see rejection for claims 8 - 9 above respectively.

18. **As to claim 21,** this is the program claim of claim 1. See the rejection for claim 1 above.

19. **As to claims 22 - 23,** see rejection for claims 2 - 3 above respectively.

20. **As to claims 25 - 26,** see rejection for claims 5 - 6 above respectively.

21. **As to claim 27,** this is the program claim of claim 7. See the rejection for claim 7 above.

22. **As to claims 28 - 29,** see rejection for claims 8 - 9 above respectively.

23. Claims 4, 10, 14, 20, 24, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton "Using non-Java code" pages 1 – 29 in view of Chan, US patent no. 6,769,123, and further in view of Igra, US patent no. 6,701,485.

24. Igra reference was cited in the last office action.

25. **As to claim 4,** Thornton teaches the step of type-checkable at runtime (runtime type checking, page 2 on section JNI).

Thornton and Chan do not explicitly teach the method signature is type-checkable.

Igra teaches the step of the method signature is type-checkable at compile time (the interface definition including signature provides type checking, col. 5 lines 1 – 50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Thornton, Chan, and Igra's system because Igra's signature type-checking would distinguish the type of the interfaces before using to call a method.

26. **As to claims 10, 14, 20, 24, and 30**, see rejection for claim 4 above.

Response to Arguments

27. Applicant's arguments, filed on 10/20/04, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

28. The prior art made of record but not relied upon request is considered to be pertinent to applicant's disclosure.

McCauley III et al, US patent no. 5,999,986, demonstrating a method for invoking proxy having interface to call an object.

Ludwig et al, US patent no. 6,006,230, demonstrating a method for creating and invoking proxy to call an object.

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ph
March 19, 2005

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